

PCT

INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C08G 63/78, 63/85, 63/183	A1	(11) International Publication Number: WO 00/64962
		(43) International Publication Date: 2 November 2000 (02.11.00)

(21) International Application Number: PCT/EP00/03474

(22) International Filing Date: 17 April 2000 (17.04.00)

(30) Priority Data:
99107370.1 22 April 1999 (22.04.99) EP(71) Applicants (for all designated States except US): LURGI
ZIMMER AG [DE/DE]; Borsigallee 1, D-60388 Frankfurt
am Main (DE). SHELL INTERNATIONALE RESEARCH
MAATSCHAPPIJ B.V. [NL/NL]; Carel van Bylandt Laan
30, NL-2596 HR The Hague (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WILHELM, Fritz
[DE/DE]; Rendeler Strasse 79 A, D-61184 Karben (DE).
SEIDEL, Eckhard [DE/DE]; Wilhelmshöher Strasse 18
D, D-60389 Frankfurt am Main (DE). REITZ, Hans
[DE/DE]; Helgebornstrasse 42, D-61191 Rosbach (DE).
THIELE, Ulrich [DE/DE]; Heinrich-von-Brentano-Strasse
2, D-63486 Bruchköbel (DE). MACKENSEN, Klaus
[DE/DE]; Zehn Morgenstrasse 25 A, D-60433 Frankfurt
am Main (DE). KELSEY, Donald, Ross [US/US]; 4706
Lake Village Drive, Fulshear, TX 77441 (US). BLACK-
BOURN, Robert, Lawrence [US/US]; 16410 Battlecreek
Drive, Houston, TX 77095 (US). TOMASKOVIC, Robert,Stephan [US/US]; 7615 Foster Creek Drive, Richmond, TX
77469 (US).(74) Agent: REVESZ, Veronika; Metallgesellschaft AG, c/o Lurgi
AG, Abt. Patente, A-VRP, Lurgiallee 5, D-60295 Frankfurt
am Main (DE).

(84) Designated States: BR, CN, JP, KR, MX, US.

Published

With international search report.

Before the expiration of the time limit for amending the
claims and to be republished in the event of the receipt of
amendments.

(54) Title: PROCESS OF PRODUCING POLYTRIMETHYLENE TEREPHTHALATE (PTT)

(57) Abstract

Process of producing polytrimethylene terephthalate (PTT) by esterification of terephthalic acid (TPA) with trimethylene glycol (TMG) in the presence of a catalytic titanium compound, precondensation and polycondensation. The esterification is effected in at least two stages, where in the first stage a molar ratio of TMG to TPA of 1.25 to 2.5, a content of titanium of 0 to 40 ppm, a temperature of 245 to 260 °C as well as a pressure of 1 to 3.5 bar are adjusted. In the at least one subsequent stage a content of titanium is adjusted which is higher than in the initial stage by 35 to 110 ppm. For generating the vacuum in the polycondensation and in the precondensation, there are used vapor jet pumps operated with TMG vapour.